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5.14 HAZARDOUS MATERIALS

This section discusses the hazardous materials that would be used in conjunction with the construction and operation of the proposed SSU6 Project. Tables are found at the end of this section. Waste management is described in Section 5.13.

The proposed facility and ancillary systems are designed to minimize the use of hazardous materials. Storage facilities and handling equipment for hazardous materials have been designed so that in the unlikely event of an accidental release of a hazardous material, the potential impacts would be below designated thresholds of significance.

To minimize the risks and offsite consequences from hazardous materials, a federal program was established in 1990 as described in Section 112 (r) of the Clean Air Act. The California Office of Emergency Services established the California Accidental Release Prevention (Cal-ARP) Program to prevent accidental releases of regulated substances. The Cal-ARP Program specifies the regulated substances, oversees the federal requirements, and determines the requirements for the preparation of a Risk Management Plan (RMP) and offsite accidental release consequence analysis.

5.14.1 Affected Environment

The SSU6 Project is south of the Salton Sea. This region of the Imperial Valley is used mostly for agriculture and geothermal power production.

No sensitive receptors (schools, hospitals, daycare facilities and long-term health care facilities) are within a 1-mile radius of the SSU6 Project site; therefore, a table of sensitive receptors is not required. However, Figure 5.15-3 in the Public Health section shows sensitive receptors within 3 miles of the plant site. None of these is anticipated to be impacted by a hazardous materials release from the SSU6 Project. The residence within the Refuge, approximately 4,000 feet northeast of the proposed facility, would be the nearest residence. The nearest public receptor is the Refuge, immediately north of the proposed plant site (see Figure 5.8-3A in the Land Use Section).

The SSU6 Project would be designed to prevent flooding (i.e., a dike of adequate height will be constructed surrounding the plant, in accordance with the Imperial County Flood Control District requirements). The SSU6 Project site is in Seismic Risk Zone 4. Construction and design would conform to the current California Building Code Seismic Zone 4 requirements and the Imperial County Land Use Ordinance.

5.14.2 Environmental Consequences

The criteria used to determine the significance of potential impacts from hazardous materials used at the SSU6 Project site were based on the Environmental Checklist Form of the CEQA Guidelines and on standards and thresholds adopted by the relevant agencies involved with this AFC. Under CEQA Guidelines, an impact may be considered significant if the project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of a hazardous material into the environment.

- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within 0.25 miles of an existing or proposed school.
- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, consequently, would create a significant hazard to the public or the environment.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

The safe transport, use, and disposal of hazardous materials at the SSU6 Project would avoid or minimize significant impacts from the potential release of hazardous materials. An accidental release could only occur if hazardous materials are handled improperly or if a catastrophic event occurs.

5.14.2.1 Construction Phase

Hazardous materials used during the construction phase would be limited to vehicle fuel and lubricants, and small volumes of flushing and cleaning fluids (phosphate or nitrate solutions), cleaning solvent, paint products, antifreeze, and pesticides. The construction contractor would be considered the generator of hazardous construction waste and would be responsible for proper handling of hazardous wastes in accordance with all applicable federal, state, and local laws and regulations, including licensing, personnel training, accumulation limits and time, reporting, and record keeping. Any hazardous wastes generated during construction would be collected in hazardous waste accumulation containers near the point of generation and moved daily to the contractor's 90-day hazardous waste storage area on site. The accumulated waste would be subsequently delivered to an authorized waste management facility.

Material Safety Data Sheets for each chemical used would be kept on site, and construction employees would be aware of their location and content. Employees will be trained to be familiar with hazardous materials release response to procedures and notifications. Equipment and supplies will be available at all construction areas to contain and control hazardous materials in case of a spill.

The most probable accidents might occur from small-scale spills during fueling, cleaning, or use of other materials. No additional measures beyond those described in this section are needed to reduce potential impacts to a less-than-significant level.

5.14.2.2 Operational Phase

Numerous hazardous materials would be stored and used on site during operation of the new geothermal resource production and power generation systems at the SSU6 Project. Table 5.14-1 lists the hazardous materials that would be used or stored on site. These include brine treatment chemicals, cooling tower water treatment chemicals, pollution control equipment chemicals, laboratory agents, and battery acid. Information provided in this table for each material includes the maximum quantity stored on site, Chemical Abstract Service (CAS) number, usage, nature of the hazard, and state/federal threshold quantities.

No substances would be stored on site in sufficient quantities to qualify as a regulated substance in either the Cal-ARP Program or a federal-regulated substance under Section 112(r) of the Clean Air

Act. Therefore, an offsite consequence analysis is not required for any process at the proposed SSU6 Project site. Because no hazardous materials to be stored at the SSU6 Project site trigger CalARP or Section 112(r) of the Clean Air Act requirements, risk management plans are also not required for any process at the SSU6 Project site. Although the Applicant does not plan to bring any of these acutely hazardous substances on site, if a chemical change is made in the future that requires the use of an acutely hazardous chemical in volumes that exceed threshold quantities (as defined by the CalARP program or Section 112(r) of the Clean Air Act), an offsite consequence analysis would be performed and a risk management plan would be prepared.

Hazardous materials and hazardous wastes would be stored in storage facilities appropriately designed for their individual characteristics. Bulk chemicals would be stored outdoors on impervious surfaces in aboveground storage tanks with secondary containment. Other chemicals would be stored and used in their delivery containers. Drains from chemical storage and feed areas that use portable vessels would be directed to the brine pond and discharged together with other plant wastewater to dedicated injection wells. All drains and vent piping for volatile chemicals would be trapped and isolated from other drains to eliminate noxious vapors. Secondary containment areas for bulk storage tanks would either be indoors or covered and not have drains. Any chemical spills in these areas would be removed with portable equipment and reused or disposed of properly. Hazardous materials would consist of waste oil, and chemicals would be stored in a separate concrete contained area. These fluids would be disposed of appropriately.

Emergency response policies and procedures would be outlined in a Hazardous Materials Business Plan/Contingency Plan that would be prepared prior to commencement of project operations. This plan would describe the necessary actions to be taken by facility personnel in case of a hazardous materials release to the air, soil, or surface waters near the plant. These procedures would include a notification checklist, with contact information for SSU6 Project-qualified individuals, emergency response agencies, regulatory agencies, police, fire, hospital, and ambulance services.

Waste lubricating materials would be periodically generated during operation and maintenance of the generating units. These materials would be collected and stored in appropriately designed and labeled storage containers. Waste lubricants would be recycled by an approved contractor in compliance with applicable regulations.

Herbicides, pesticides, and algacides would be stored in small quantities within a suitable containment structure. The immediate area around these chemicals would be appropriately labeled. The storage of such chemicals on site would be minimized. In the unlikely event that any of these chemicals must be disposed of, such disposal would be conducted in compliance with all local, state, and federal disposal and handling regulations.

Solvents may be used for parts cleaning and other maintenance activities. The use of solvents on site would be minimized. All solvents would be stored in labeled areas in appropriate containers with secondary containment. Spent solvents would be recycled, if practical, or would be disposed of appropriately.

Curbs, berms, and concrete pits would be used where accidental releases of hazardous could occur. All containment areas would be constructed in accordance with the applicable laws, ordinances, regulations, and standards. Containment areas would be drained to appropriate collection areas or neutralization tanks for recycling or offsite disposal. Traffic barriers would protect piping and tanks from potential traffic hazards.

To minimize impacts from accidental releases, workers would be trained in methods for safe handling of hazardous materials, use of response equipment, procedures for mitigation of a release, and coordination with local emergency response organizations. More importantly, to avoid or minimize impacts from the accidental releases of hazardous materials, non-hazardous or less hazardous materials would be used where possible, or engineering controls would be implemented.

The only substantial flammable material to be stored at the SSU6 Project site is diesel fuel, which would be used by emergency generators and a fire pump. This fuel would be stored in aboveground carbon steel tanks with a maximum combined capacity of 2,000 gallons. The tanks would have appropriate secondary containment as described in the Uniform Fire Code Article 80. The diesel storage area would be kept free of combustible materials. Because of these mitigation measures, the potential impacts presented by the storage or use of the diesel fuel are less than significant.

Vessels and piping that process heated pressurized geothermal fluids can be found throughout the plant site. Ample relief valves would be included on all systems that handle these fluids including crystallizers, atmospheric flash towers, clarifiers, dewatering systems, and piping systems. Because of this passive mitigation measure, potential explosive impacts resulting from heated pressurized geothermal fluids are less than significant. Geothermal brine released during upset conditions would be discharged to a lined pond designed to comply with Title 27 California Code of Regulations. Liquid from the pond would be contained in pipes and pumped down injection wells. The entire plant perimeter near process equipment would be designed as a bermed concrete containment area. Liquid spills would be collected in sumps, and pumped back to the plant process vessels or to the brine pond. The line brine ponds have been designed with ample capacity to contain all geothermal fluids that could potentially be released because of equipment failure or upset conditions.

The risk of a fire or explosion on site would continue to be reduced through adherence to applicable codes and the development and implementation of effective safety management practices.

The most probable accidents involving hazardous materials may include small-scale spills of waste oil or other chemicals from product or satellite storage areas. To avoid potential impacts all spills would be cleaned up immediately. No acutely hazardous materials would be stored on site in quantities that exceed federal or state threshold quantities.

The probability of an offsite impact resulting from a hazardous materials release at the SSU6 Project site is extremely unlikely because:

- No acutely hazardous materials would be stored at the SSU6 Project site
- All hazardous materials would be provided with secondary containment to minimize the impacts of a release
- Hazardous Materials Business Plan would be developed and implemented in cooperation with the Imperial County Department of Public Works, Environmental Health Services Division to further reduce the risk of a hazardous materials release
- Workers would be trained in procedures for safe handling of hazardous materials and for mitigation of a hazardous materials release
- The Applicant would comply with all hazardous materials regulations listed in Table 5.14-2.

Therefore, potential impacts from hazardous materials associated with the SSU6 Project are less than significant.

5.14.3 Cumulative Impacts

Section 5.17 presents the projects considered in this cumulative impacts analysis. Other facilities near the SSU6 Project that store hazardous materials are nine nearby geothermal plants and mineral processing plant. The mineral processing plant uses several hazardous materials, including hydrochloric acid, sulfuric acid, and a zinc solvent extraction solution called SX-11. This solvent, a long chained hydrocarbon, has a low rate of volatilization and is housed in dedicated structures for this material. All hazardous materials at the mineral processing plant are stored and handled in accordance with all applicable regulations and are provided with secondary containment. The hazardous materials used at the other geothermal plants are similar to those proposed for the SSU6 Project, but in smaller quantities. Because the risk of a serious hazardous materials release from the SSU6 Project is very low, the risk of a serious hazardous materials release from one of the surrounding facilities is just as unlikely. Only a natural disaster such as a major earthquake could cause simultaneous accidental releases at multiple facilities. However, even under these circumstances, the releases would be localized to the facility sites and would not result in a cumulative hazard to the public on the environment. Therefore, a release from SSU6 would not make a significant contribution to any cumulative impacts.

5.14.4 Mitigation Measures

The SSU6 Project design features and hazardous materials handling practices would reduce potential hazardous materials-related impacts to less than significant levels. Therefore, mitigation measures would not be required. However, the Applicant will prepare the following, as required by the regulations listed in Section 5.14.5:

- **Haz-1:** The applicant would prepare a HMBP before bringing hazardous materials on site.
- **Haz-2:** The applicant would prepare a fire protection plan before bringing hazardous materials on site.
- **Haz-3:** The applicant would create a Hazardous Communication Program before the start of operations at the facility.

5.14.5 Applicable Laws, Ordinances, Regulations, and Standards

Applicable Hazardous Materials Handling LORS are summarized in Table 5.14-2 and described below. Agency contacts are provided in Table 5.14-3.

5.14.5.1 Federal Authorities and Administering Agencies

Resource Conservation and Recovery Act (RCRA); 42 USC §6901 et seq.; 40 CFR Parts 260–272. These codes and regulation sections set forth federal standards for the generation and management of solid waste (42 USC §6922). Application to the USEPA is coordinated with

application to the California Department of Toxic Substances Control for an USEPA identification number and hazardous waste generator license. RCRA requires facilities to obtain permits to store, transport, and dispose of hazardous waste for more than 90 days.

The administering agencies for the above regulations are the USEPA, Region IX and Cal/EPA, Department of Toxic Substances Control.

As required, SSU6 would comply with these requirements for hazardous waste. Refer to Sections 3.3.4 and 5.14.2.2 for a detailed discussion of waste management.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund), 42 USC 9601 et seq. 40 CFR 302 as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Emergency Planning and Community Right-to-Know Act of 1986 (SARA Title III), 42 USC §11001 et seq; 40 CFR Parts 350, 355 and 370. CERCLA prescribes that the National Response Center be notified for any release of a reportable quantity of a hazardous substance (42 USC §9603); and includes notification requirements for any potentially injured parties in connection with any such release (42 USC §9611(g)) and requirements for demonstration of financial responsibility in connection with storage of hazardous substances (42 USC §9608(b)).

Superfund regulations define “hazardous substance” as any material appearing in lists referenced in 42 USC 9601 (14) (Section 101). USEPA’s regulations at 40 CFR 302.4, Table 302.4, set forth the list of hazardous substances under CERCLA and the reportable quantities for each.

SARA Title III established a nationwide emergency planning and response program and imposed reporting requirements for businesses that store, handle, or produce significant quantities of hazardous or acutely toxic substances as defined under federal laws. It requires the states to implement a comprehensive system to inform federal authorities, local agencies, and the public when a significant quantity of hazardous acutely toxic substance is stored or handled at a facility. In California, many SARA requirements are reflected in Chapter 6.95 of the California Health and Safety Code.

The administering agencies for the above regulations are the USEPA, Region IX, the National Response Center, and the Imperial County Department of Public Health, Environmental Health Services Division.

As required, SSU6 would comply with these requirements for hazardous waste. Refer to Sections 3.3.4 and 5.14.2.2 for a detailed discussion of hazardous waste management.

29 CFR §1910 et. seq and §1926 et seq. These sections contain requirements for equipment used to store and handle hazardous materials. This regulation also addresses requirements for equipment necessary to protect workers in emergencies. It is designed primarily to protect worker health, but also contains requirements that affect general facility safety. It requires employers to notify workers of hazards associated with hazardous materials in the workplace. The California regulations contained in Title 8 (California equivalent of 29 CFR) are generally more stringent than those contained in Title 29.

The administering agencies for the above regulation are the USEPA and CalOSHA.

As required, SSU6 would comply with these requirements for hazardous waste. Refer to Section 3.3.4 and 5.14.5 for a detailed discussion of hazardous waste management. The Applicant and construction contractors would educate employees about waste hazards on site.

49 CFR Parts 172, 173, and 179. This code provides standards for labels, placards, and markings on hazardous waste shipments by truck (Part 172) and standards for packaging hazardous wastes (Part 173 and 179).

The administering agencies for the above code are the CHP and Caltrans. The Applicant will properly contain and label hazardous wastes for transportation off site.

5.14.5.2 State Authorities and Administering Agencies

The CEC is the lead agency for the proposed SSU6, and therefore, applying for state permits through the Regional Water Quality Control Board, USEPA Region IX, Department of Toxic Substances Control, Imperial County Fire Prevention Department, Imperial County Department of Public Works, Integrated Waste Management Board, Imperial County Air Pollution Control District, California Air Resources Board, or Cal-OSHA would not be required by the Applicant. However, the CEC takes into consideration the state and local agency requirements and permits for the SSU6, and would therefore require the Applicant to demonstrate that the proposed project would comply with the regulations and requirements.

California Porter-Cologne Water Quality Control Act; California Water Code §§13260–13269; 23 CCR §2510 Article 9 et seq. These code and regulation sections address waste discharge requirements (WDR) of the RWQCB, Region 7 and would apply to any storage or disposal of solid and liquid wastes by the SSU6 project to the extent that such action may affect the quality of the waters of the state.

The administering agency for the above code and regulation sections is the RWQCB, Region 7.

As discussed in Section 5.4, the Applicant would develop a SWPPP to address surface water pollution from project area runoff. Wastes from the SSU6 Project would only be sent to disposal sites in California having the required WDRs.

Hazardous Waste Control Act of 1972, as amended; California Health & Safety Code §25100 et seq.; 22 CCR §66001 et seq. These code and regulation sections address the management of hazardous wastes. Because SSU6 project activities would not include hazardous waste treatment and all hazardous waste would be offered for transportation off site by a contractor, the requirements of principal concern are those governing the generation, storage, and preparation for shipment of hazardous wastes. Potentially applicable requirements include the following:

- Determining Waste Characterization (22 CCR §25100 et seq., 66305, 66471)
- Obtaining a Waste Identification Number (22 CCR §66472)
- Certifying on waste shipment manifests that the Applicant has a program to reduce the volume and toxicity of the waste to the degree that it has determined to be economically practicable, and reporting to Department of Toxic Substances Control (DTSC), at least every

two years, the changes in volume and toxicity of wastes achieved through waste reduction (42 USC §6922(a) and (b); California Health & Safety Code §25244)

- Complying with standards for the storage of hazardous wastes (California Health & Safety Code §§25123.3; 15117.12; 22 CCR §§66508, 25159–25159.5)
- Arranging proper transport and disposal or treatment of hazardous wastes (California Health & Safety Code §§25163, 25203; 22 CCR §§66472, 66480)
- Preparing a manifest for the transportation of hazardous wastes; providing DTSC with a biennial report regarding hazardous waste shipments (22 CCR §§66480-66484, 66493)
- Complying with packaging and labeling requirements for shipments of hazardous wastes [22 CCR §§66504 – incorporating the US Department of Transportation requirements at 49 CFR Parts 173, 178 and 179 (packaging), and Part 172 (labeling and marking)]
- Maintaining waste testing and disposal records for specified periods (22 CCR 66492)
- Complying with financial responsibility requirements (California Health & Safety Code §§25245-25249; 22 CCR §§67001-67035)
- Complying with used oil management requirements, unless exempted (California Health & Safety Code §25250-25250.25)
- Complying with emergency preparedness, prevention, and planning requirements (22 CCR §§67120-67126)
- Complying with monitoring requirements (22 CCR §§67180-67188).

For compliance with the Hazardous Waste Control Act, refer to Section 5.14.5.2.

The administering agencies for the above code and regulation sections are the USEPA, Region IX and the DTSC.

Section 5.14.2 includes a discussion of the aspects of this regulation would be addressed at SSU6.

8 CCR §339; §3200 *et seq.*, §5139 *et seq.*, and §5160 *et seq.* 8 CCR §339 lists hazardous chemicals relating to Hazardous Substance Information and Training; 8 CCR §3200 *et seq.* and 5139 *et seq.* address control of hazardous substances; 8 CCR §5160 *et seq.* addresses the use, handling, and storage of hot, flammable, poisonous, corrosive, and irritant substances.

The administering agency for the above regulations is the CEC.

SSU6 would comply with this code through the submittal of a waste management plan prior to the start of operations.

California Public Resources Code §25523(a); 20 CCR §§1752, 1752.5, 2300 - 2309, and Chapter 2, Subchapter 5, Article 1, Appendix B, Parts (c) and (1). The code sections provide for the inclusion of requirements in the CEC's decision on an AFC to assure protection of waste handling and control, and water quality protection based on Health Risk Assessment Guidelines.

The administering agency for the above code is the CEC.

Section 5.15 includes a quantitative health risk assessment for SSU6 that complies with this code.

California Health & Safety Code §§25500 - 25543.3; 19 CCR §2720-2734. These sections require the preparation of a Hazardous Materials Business Plan (HMBP). Such plans address in detail emergency planning and response aspects in case of a hazardous materials release at a facility. The sections may also require the preparation of a Cal-ARP Risk Management Plan (§§25531-25543.3) where highly toxic or highly flammable regulated substances are used. This plan must be based on studies identifying potential hazards associated with the handling of these materials proposed for use at the facility.

The administering agency for the above code is Imperial County Department of Public Health, Environmental Health Services Division. Imperial County is a non-Certified Unified Program Agency (CUPA) county in which the responsibilities are divided between county departments. Imperial County Department of Public Health, Environmental Health Services Division is the administering agency for HMBPs and the Cal-ARP Program.

Prior to the storage of hazardous materials on site, the Applicant would prepare a HMBP.

Uniform Fire Code, Article 80 and Others. The code includes provisions for storage and handling of hazardous materials. The fire code contains provisions regarding fire protection and neutralization systems for emergency venting (see Section 80.303, D [compressed gases]). Article 4 establishes hazardous materials storage thresholds above which a permit is required. Article 79 presents requirements for combustible and flammable liquids.

The administering agencies for the above code are Imperial County Planning/Building Department, Imperial County Department of Public Health, Environmental Health Services Division, and Imperial County Fire Protection Department. Imperial County is a non-CUPA County in which the responsibilities are divided between county departments. Imperial County Planning/Building Department is the administering agency for the underground storage tank (UST) program, including UST permitting and UST release reporting. Imperial County Department of Public Health, Environmental Health Services Division is the administering agency for HMBPs and the Cal-ARP Program. Imperial County Fire Prevention Department is the administering agency for fire protection and safety.

The Applicant would prepare an Operation Fire Protection Plan and an HMBP prior to the storage of hazardous materials on site to comply with this code.

Hazardous Waste Source Reduction and Management Review, 22 CCR §67100. This regulation requires generators of hazardous and extremely hazardous waste to perform a source reduction evaluation every four years. Following the evaluation the generator must submit a plan that details source reduction measures to be implemented. The generator would later certify that the plan had been implemented and would file a report describing source reduction methods, implementation schedule, and a description of how the source reduction measures apply to the stationary source. The administering agency for the above regulation is the DTSC.

SSU6 would comply with this code by documenting hazardous waste reduction efforts in accordance with the regulatory requirements.

California Integrated Waste Management Act and 22 CCR §17200 This act regulates solid waste disposal, recycling, and the storage and transfer of non-hazardous solid wastes. Specific rules apply to waste tires, petroleum contaminated soils, industrial solid waste, and ash disposal.

The administering agency for the above regulation is the Imperial County Department of Public Health, Environmental Health Services Division in cooperation with the Integrated Waste Management Board.

SSU6 would comply with this act by sending solid wastes to solid waste facilities in California having the appropriate permits under these regulations.

Title 8, California Code of Regulations. Section 5189 requires facility owners to develop and implement effective safety management plans to ensure that large quantities of hazardous materials are handled safely. While such requirements primarily provide for the protection of workers, they also indirectly improve public safety and are coordinated with the RMP process.

The administering agency for the above regulation is Cal-OSHA.

The Applicant will prepare the required safety management plan before beginning operations.

5.14.5.3 Local Authorities and Administering Agencies

The CEC is the lead agency for the proposed SSU6, and therefore, applying for local permits through the Imperial County Planning/Building Department, Imperial County Department of Public Health, Environmental Health Services Division, and Imperial County Fire Protection Department, would not be required. However, the CEC takes into consideration the local agency requirements and permits for the SSU6, and would therefore require the Applicant to demonstrate that the proposed project would comply with the regulations and requirements.

Imperial County Land Use Ordinance, Title 9, Division 10, Chapter 3, Section 91003.02.

This regulation requires facilities that use USTs (hazardous substances) to comply with the provisions of Article 79 of the 1997 Uniform Fire Code, relating to flammable and combustible liquids and with California Code of Regulations (CCR) Title 23, Chapter 3, Subchapter 16.

The administering agency is Imperial County Planning/Building Department.

No USTs are currently included in the design of SSU6, nor are they expected to be used at the proposed facility at any time. However, if the installation of a UST were needed in the future, a UST permit would be obtained from the Imperial County Planning/Building Department.

Imperial County Land Use Ordinance, Title 9, Division 17, Chapter 1 Section 91701.01. This section of the ordinance requires that the facilities of a geothermal project be maintained and operated to minimize the possibility of fire, explosion, or any unplanned release of hazardous materials. It also requires that all activities involving use of flammable, explosive, highly corrosive, or reactive materials are provided with adequate safety devices and fire suppression equipment. Additionally, wastes must be disposed of in compliance with local, state, and federal regulations.

The administering agencies for the above regulation are Imperial County Department of Public Health, Environmental Health Services Division and the Imperial County Fire Protection Department. Imperial County Department of Public Health, Environmental Health Services Division is the administering agency for HMBPs, routine hazardous materials inspections, and the Cal-ARP Program. Imperial County Fire Prevention Department is the administering agency

for fire protection and safety. The DTSC is the administering authority related to hazardous waste generation and disposal.

SSU6 would comply with this code through the submittal of an HMBP, which includes an Emergency Action Plan, prior to the storage of hazardous materials on site. The Imperial County Fire Prevention Department would also conduct a final safety inspection of the facility and the Applicant would obtain an USEPA identification number and hazardous waste generator license from DTSC.

California Building Code (CBC). The CBC contains requirements regarding the storage and handling of hazardous materials. The Chief Building Official at the local government level must inspect and verify compliance with these requirements prior to issuance of an occupancy permit.

Prior to the start of construction of the project, the Applicant would submit site plans to the CEC Construction Project Manager for review and approval, as well as any recommendation from the County.

5.14.5.4 Industry Codes and Standards

American Institute of Chemical Engineers (AIChE) – Center for Chemical Process Safety, 1985 Guidelines. These guidelines provide for chemical hazard evaluation procedures.

The administering agency for the above regulation is the Imperial County Department of Public Health, Environmental Health Services Division.

SSU6 would comply with this requirement through the submittal of an HMBP and through retaining MSDS sheets at the plant site prior to the storage of hazardous chemicals on site.

5.14.5.5 Permits Required and Permit Schedule

Responsible Agency	Permit/Approval	Schedule
Imperial County Department of Public Health, Environmental Health Services Division	Hazardous Material Business Plan	Due date is flexible. Aim to submit the completion of construction and receive approval no later than 30 days prior to operations.

5.14.6 References

California Office of Emergency Services. 1998. California Code of Regulations, Title 19. Public Safety, California Accidental Release Prevention Program, November 1998

County of Imperial, Public Health Department, Division of Environmental Health 2000. Hazardous Materials Business Plan Guidance and Requirement.

U.S. EPA (U.S. Environmental Protection Agency). 1999. Risk Management Program Guidance for Offsite Consequence Analysis, April 1999, EPA 550-B-99-009.

U.S. EPA (U.S. Environmental Protection Agency). 1998. Chemical Accident Prevention Provisions, Appendix A 40 CFR part 68, July 1, 1998, 59 FR 4493.

U.S. EPA (U.S. Environmental Protection Agency). 1998. Emergency Planning and

Notification, Appendix A 40 CFR part 355, July 1, 1998, 52 FR 13395.

U.S. EPA (U.S. Environmental Protection Agency). 1996. Federal Register, Part III Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act Section 112(r)(7), June 20, 1996, 40 CFR Part 68, FRL-5516-5.

**Table 5.14-1
ANTICIPATED HAZARDOUS MATERIALS FOR
PROPOSED USE AT THE OPERATIONAL SALTON SEA UNIT 6**

Material	Chemical Constituent(s) and CAS Number(s)	Storage Type	Location/ Application	Hazardous Characteristics	Maximum Quantity On Site	Regulatory Thresholds (lbs)			
						Cal-ARP	Federal RQ	Federal TPQ	Federal TQ
Antifoam ¹ (e.g., Polyglycol ester – Nalco 7471)	Ethoxylated Tall Oil: 61791-00-2	Portable Vessel	Brine Handling	Chronic	1,950 gal	-	-	-	-
Flocculant ¹ (e.g., Cationic Polyacrylamide – Nalco 9907)	no hazardous constituents	Tank, Plastic	Brine Handling	None	15,840 gal	-	-	-	-
Inhibitors ¹ (e.g., Phosphonomethylated Amine – Nalco 1387)	Ethylene Glycol: 107-21-1, Methanol: 67-56-1, Phosphorous Acid: 10294-56-1	Tank, Plastic	Brine Handling	Acute, chronic Acute, chronic, fire Chronic, reactive	10,000 gal	- - -	5000 5000 -	- - -	- - -
32% Hydrochloric Acid	7647-01-0	Tank, Plastic	Brine Handling	Acute, chronic, reactive	32,000 gal	-	5,000	-	-
Monopotassium Phosphate	None	Portable Vessel	H ₂ S Abatement		500 lb	-	-	-	-
Cooling Water Treatment Sulfonated Carboxylated Polymer ¹ (e.g., TRASAR 23260 Nalco)	no hazardous constituents	Portable Vessel	Cooling Tower Treatment	None	2,150 gal	-	-	-	-
Bio-Detergent ¹ (e.g., Nalco 97ND048)	Sodium Dodecylbenzene-sulphonate: 25155-30-0	Portable Vessel	Cooling Tower Treatment	Acute	1,658 gal	-	1000	-	-
12% Sodium Hypochlorite	7681-52-9	Tank, Plastic	Cooling Tower Treatment	Acute	10,000 gal	-	500	-	-

Table 5.14-1 (continued)
ANTICIPATED HAZARDOUS MATERIALS FOR PROPOSED USE
AT THE OPERATIONAL SALTON SEA UNIT 6

Material	Chemical Constituent(s) and CAS Number(s)	Storage Type	Location/ Application	Hazardous Characteristics	Maximum Quantity On Site	Regulatory Thresholds (lbs)			
						Cal-ARP	Federal RQ	Federal TPQ	Federal TQ
Biocide (e.g., Nalco 1317)	Sodium Dimethyldithiocarbamate: 128-04-1 [Nabam Disodium Ethylene Bis-dithiocarbamate: 142-59-6] Ethylenethiourea: 96-45-7	Portable Vessel	Weekly Cooling Tower Biocide Treatment	Acute, chronic	1,600 gal	- - -	- - 10 (1000 lb of product)	- - -	- - -
Diesel Fuel	68476-34-6	Tank, UL C.S.	Diesel Fire Pump and Generators	Acute, chronic, fire	2,000 gal	-	-	-	-
Sulfuric Acid ² 29.5 wt%	7664-93-9		Station Batteries	Acute, chronic, reactive	600 US gal	1,000	1,000	1,000	-
Various Laboratory Chemicals	N/A	Small	Laboratory Reagents	-	< 5.0 lb	-	-	-	-
ARI-340, Iron Concentrate Solution	EDTA Ammonium Iron: 21265-50-9, Trisodium nitrilotriacetate: 5064-31-3	320-gal polyethylene totes	H ₂ S Abatement System, Chemical Addition Skid	- -	960	-	-	-	-
ARI-350 Chelate Make-up	Trisodium nitrilotriacetate: 5064-31-3	320-gal polyethylene totes	H ₂ S Abatement System, Chemical Addition Skid	-	960	-	-	-	-

Table 5.14-1 (continued)
ANTICIPATED HAZARDOUS MATERIALS FOR PROPOSED USE
AT THE OPERATIONAL SALTON SEA UNIT 6

Material	Chemical Constituent(s) and CAS Number(s)	Storage Type	Location/ Application	Hazardous Characteristics	Maximum Quantity On Site	Regulatory Thresholds (lbs)			
						Cal-ARP	Federal RQ	Federal TPQ	Federal TQ
ARI-400 Biochem	Trisodium nitrilotriacetate: 5064-31-3, Alkyl dimethylbenzyl ammonium chloride mixture: 68956-79-6 and 68391-01-5	85-gal polyethylene tank	H ₂ S Abatement System, Chemical Addition Skid	- - -	165	-	-	-	-
ARI-600 Surfactant	Nonylphenol ethoxylates: 68412-54-4	85-gal polyethylene tank	H ₂ S Abatement System, Chemical Addition Skid	-	165	-	-	-	-
45 wt% Potassium Hydroxide Solution	1310-58-3	320-gal polyethylene totes	H ₂ S Abatement System, Chemical Addition Skid	Acute, chronic, reactive	960	-	1000	-	-

¹ Specific antifoam, flocculant, inhibitors, sulfonated carboxylated polymer, and bio-detergent agents may vary depending on brand selected. Characteristics of representative chemicals are provided and are notated in parentheses. If it is determined that other chemicals are to be used for these purposes, they would have hazardous characteristics and regulatory thresholds would be evaluated by the Applicant.

2 Sulfuric acid fails the evaluation pursuant to Section 25532(g)(2) of the HSC but remains listed as a Regulated Substance only under the following conditions:

- a. If concentrated with greater than 100 pounds of sulfur trioxide or the acid meets the definition of oleum. (The Cal-ARP threshold for sulfur trioxide is 100 pounds; the Cal ARP threshold for oleum is 10,000 pounds.)
- b. If in a container with flammable hydrocarbons (flash point < 73°F).

The sulfuric acid used in station batteries at the proposed SSU6 Project would not meet these criteria, and therefore does not trigger the Cal ARP threshold that would necessitate an RMP.

**Table 5.14-2
SUMMARY OF LAWS, ORDINANCES, REGULATIONS, AND STANDARDS**

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
5.14 Hazardous Material Handling					
Federal					
	Resource Conservation and Recovery Act, 42 USC §6901 <i>et seq.</i> 40 CFR 260-272 (RCRA)	Requires facility to obtain permits to store, transport, and dispose of hazardous waste. California is an authorized permitting state.	Section 5.14.5.1	California Department of Toxic Substances Control	1
	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA Superfund), 42 USC 9601 <i>et seq.</i> 40 CFR 302 as amended by the Superfund Amendments and Reauthorization Act of 1986, Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 (SARA Title III), 42 USC §11001 <i>et seq.</i> ; 40 CFR Parts 350, 355 and 370.	Includes notification requirements for release of hazardous substances and financial responsibility in connection with storage of hazardous substances.	Section 5.14.5.1	Imperial County Public Health Department Environmental Health Services Division	10
	29 CFR §1910 <i>et. seq.</i> and §1926 <i>et seq.</i>	Requires employers to notify workers of hazards associated with materials in the workplace.	Section 5.14.5.1	California Occupational Safety and Health Administration (Cal-OSHA)	2
	49 CFR Parts 172, 173, and 179	Sets placarding and packaging standards. California is an authorized state for regulating these standards.	Section 5.14.5.1	Caltrans; California Highway Patrol (CHP)	3, 4
State					
	California Porter-Cologne Water Quality Control Act; California Water Code §13260 - 13269; 23 CCR §2510 Article 9 <i>et seq.</i>	Requires facilities to obtain permits to discharge to waters of the state and to report spills.	Section 5.14.5.2	Regional Water Quality Control Board (RWQCB)	5
	Hazardous Waste Control Act of 1972, as amended; California Health & Safety Code §25100 <i>et seq.</i> ; 22 CCR §66001 <i>et seq.</i>	Requires facilities characterize, properly store, placard, manifest, transport and dispose of hazardous waste.	Section 5.14.5.2	DTSC	1

Table 5.14-2 (continued)
SUMMARY OF LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
	8 CCR §339; §3200 et seq., 5139 et seq., and 5160 et seq.	Contains regulations regarding hazardous materials.	Section 5.14.5.2	CEC	6
	California Public Resources Code §25523(a); 20 CCR §§1752, 1752.5, 2300 - 2309, and Chapter 2, Subchapter 5, Article 1, Appendix B, Parts (c) and (1)	Provide for inclusion of requirements in the CEC decision on an AFC to assure waste handling control and water quality protection.	Section 5.14.5.2	CEC	6
	California Health and Safety Code §§25500-25543.3; 19 CCR §2720-2734	Requires preparation of a Hazardous Materials Business Plan and outlines the requirements of the California Accidental Release Program including Risk Management Plans.	Section 5.14.5.2	Imperial County Public Health Department Environmental Health Services Division	10
	Uniform Fire Code, Article 80 and others	Regulates storage and handling of hazardous waste	Section 5.14.5.2	Imperial County Planning/Building Department; Imperial County Public Health Department, Environmental Health Services Division; Imperial County Fire Protection Department	11, 12, 13
	Hazardous Waste Source Reduction and Management Review 22 CCR § 67100	Requires facilities that generate hazardous waste to prepare hazardous waste reduction performance reports every four years.	Sections 5.14.5.3 and 5.14.5.2.	DTSC	1
	California Integrated Waste Management Act and 22 CCR § 17200	Regulates solid waste disposal and recycling.	Section 5.14.5.2	California Integrated Waste Management Board; Imperial County Department of Public Works	7, 13
	California Government Code	Restricts issuance of occupancy permits based on submittal of an RMP	Section 5.14.5.2	Imperial County Planning/ Building Department	11

Table 5.14-2 (continued)
SUMMARY OF LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Jurisdiction	LORS	Requirements	Conformance Section	Administering Agency	Agency Contact
	Title 8, California Code of Regulations	Meet requirements for a safe and hazard-free working environment during general work activities not explicitly exempted.	Section 5.16.5.2	Cal-OSHA	2
	Public Nuisance California Health & Safety Code § 41700	Prohibits emissions in quantities that adversely affect public health, other businesses, or property.	Section 5.1.5.2 Air Quality LORS.	IMPAPCD, with CARB oversight.	8, 9
Local					
Imperial County Land Use Ordinance					
	Imperial County Land Use Ordinance Title 9, Division 10, Chapter 3, § 91003.02	Requires facilities that use underground storage tanks (hazardous substances) to comply with the provisions of Article 79 of the 1997 Uniform Fire Code, relating to flammable and combustible liquids, and with California Code of Regulations Title 23, Chapter 3, Subchapter 16.	Section 5.14.5.3.	Imperial County Planning/ Building Department	11
	Imperial County Land Use Ordinance Title 9, Division 17, Chapter 1, § 91701.01	Requires that a geothermal project facility be maintained and operated to minimize the possibility of fire, explosion, or any unplanned release of hazardous materials. Also requires the use of adequate safety devices and fire suppression equipment; and waste disposal of in compliance with local, state, and federal regulations.	Section 5.14.5.3	Imperial County Department of Public Health, Environmental Health Services Division; Imperial County Fire Protection Department; DTSC	1, 10, 12
	California Building Code	Regulates storing and handling of hazardous materials.	Section 5.14.5.2	Imperial County Planning/ Building Department	9

**Table 5.14-3
AGENCY CONTACT LIST FOR
LAWS, ORDINANCES, REGULATIONS, AND STANDARDS**

Federal					
	None				
State					
1	California DTSC Haz. Waste Mgmt. Program Jan Radimsky PO Box 806 Sacramento, CA 95812 916.324.1819	2	CalOSHA Paul Gupta 10350 Heritage Park Dr., Ste. 201 Santa Fe Springs, CA 90670 (562) 944-9366	3	Caltrans South Region Permits Office Siong Yap MS# 618 655 West 2nd Street, San Bernardino, CA 92404-1400 909.383.7513
4	California Highway Patrol Hector Tavares California Highway Patrol 2331 Highway 86 Imperial, CA 92251 760.482.2500	5	California RWQCB, Colorado River Basin Region 7 Basin Planning Supervisor - Joan Stormo 573-720 Fred Waring Drive Suite 100 Palm Desert, CA 92260 Phone: (760) 346-7491	6	California Energy Commission Mr. Paul C. Richins Energy Facilities Licensing Mgr. 1516 9th Street, MS 15 Sacramento, CA 95814 (916) 654-4074 (916) 654-3882 prichins@energy.state.ca.us
7	California Integrated Waste Management Board Scott Walker, Manager Permitting and Enforcement Div. 1001 I Street PO Box 4025 Sacramento, CA 95812-4025 (916) 341-6319	8	California Air Resources Board Mr. Mike Tolstrup 1001 I Street Sacramento, California 95814 (916) 322-6026	9	Imperial County APCD Stephen Birdsall 150 South 9th Street El Centro, CA 92243-2801 (760) 482-4606
Local					
10	Imperial Co. Dept. of Public Health Environmental Health Svcs. Div. Nick del Valle, Registered Envir. Health Specialist II Courthouse 939 Main St. B-7, El Centro, CA 760.482.4203	11	Imperial County Planning/Building Department Jurg Heuberger 939 Main Street El Centro, CA 760.482.4236	12	Imperial Co. Fire Protection Dept. Joe R. Buzo, Imperial County Fire Chief Lon Hettinger, Captain of Fire Prevention 940 W. Main St., Suite 101 El Centro, CA 92243 760.353.5223 & 760.355.1191
13	Imperial Co. Public Works Dept. Solid Waste Division 155 South 11 th St. El Centro, California 92433 760.482.4462				